
Algorithm 1 CloudFuzzy Model Algorithm

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1: Input: Meteorological data from 'pocasi2.xlsx'
2: Output: Best FIS model with minimum MSE
3: procedure CLOUDFUZZYMODEL
4:   data  $\leftarrow$  READDATA(pocasi2.xlsx)
5:   optimal_mse1, optimal_fis1  $\leftarrow$  OPTIMAL1(data)
6:   optimal_mse2, optimal_fis2  $\leftarrow$  OPTIMAL2(data)
7:   if optimal_mse1 < optimal_mse2 then
8:     best_fis  $\leftarrow$  optimal_fis1
9:     best_mse  $\leftarrow$  optimal_mse1
10:  else
11:    best_fis  $\leftarrow$  optimal_fis2
12:    best_mse  $\leftarrow$  optimal_mse2
13:  end if
14:  EVALUATEMODEL(data, best_fis)
15:  SAVEMODEL(best_fis, 'BestOptimalCloudFuzzyFIS.fis')
16:  COMPAREMODELS
17: end procedure
18: procedure OPTIMAL1(data)
19:   ... (details of Optimal1 algorithm) ...
20:   return mse_new, trained_fis
21: end procedure
22: procedure OPTIMAL2(data)
23:   ... (details of Optimal2 algorithm) ...
24:   return optimal_mse2, optimal_fis2
25: end procedure
26: procedure COMPAREMODELS
27:   ... (details of comparison algorithm) ...
28: end procedure
29: procedure EVALUATEMODEL(data, fis)
30:   ... (details of model evaluation) ...
31: end procedure
32: procedure SAVEMODEL(fis, filename)
33:   ... (details of model saving process) ...
34: end procedure
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